

Docket No. 200311400-1

**Remarks**

This Amendment is responsive to the Office Action of **September 20, 2005**.  
Reexamination and reconsideration of **claims 1-40** is respectfully requested.

**Summary of The Office Action**

**Claims 1-40** were Allowed.

The drawings were objected to under 37 CFR 1.83(a) for purportedly not showing every claimed feature.

**Claims 1 and 29** were objected to because of the following informalities: claim 1 refers to moving a bubble located between the ejection chambers and the filter to a region where the bubble can pass through the filter, and claim 29 refers to moving a pre-existing bubble located between the electrical components and the filter to a location where the bubble can pass through the filter. However, in both instances if the bubble is already between the ejection chambers or the electrical components and the filter, the bubble has already passed through the filter. Appropriate correction is required.

**Claim 33** was objected to because the recited limitation "the processor" in line 9 has insufficient antecedent basis.

**Claim 34** was objected to because the recited limitation "the processor" in line 8 has insufficient antecedent basis for this limitation in the claim.

**Objections to Drawings**

The drawings were objected to because they purportedly do not show every claimed feature. The Office Action identifies the features in question as: (1) moving a bubble located between the ejection chambers and the filter to a region where the bubble can pass through the filter, and (2) moving a pre-existing bubble located between the electrical components and the filter to a location where the bubble can pass through the filter.

Docket No. 200311400-1

The language of (1) appears in claim 1 and the language of (2) appears in claim 29.

Applicant draws the Examiner's attention to Figures 10 through 12, and 12a, 12b, 13a, and 13b. Applicant believes these figures show at least one example of moving of bubble as claimed. First, figure 10 shows a top view of an example print head and figure 11 is a cross-section view. A bubble 602c is shown between a filter 802a and electrical components (e.g. resistors 1013) or ejection chambers 1018. The specification describes these figures in paragraphs [0060] to [0065]. The bubble 602c is described as beneath the filter 802a and will be moved toward aperture 806a. The bubble will be moved to migrate through the aperture 806a (and thus through the filter 802a) and up into slot 304c as shown in figures 12b and 13b.

Therefore, Applicant believes that at least this series of figures show the claim language of moving a bubble located between the ejection chambers and the filter to a region where the bubble can pass through the filter as claimed.

As another example, Figures 6 and 7 illustrate moving a bubble 602 indicated by directional arrows "p" and "q". For this additional reason, Applicant respectfully submits that the claimed features are shown in the figures and the drawing objections should be withdrawn.

If the Examiner has any questions regarding the figures, the Examiner is invited to contact the undersigned attorney to discuss them in detail.

#### **Objections to Informalities in the Claims**

The Examiner's careful review of the claims is greatly appreciated. All of the informalities identified by the Examiner have been corrected in the claims. In particular, the antecedents have been corrected in claims 33 and 34 that relate to the phrase "the processor". Claims 33 and 34 are computer-readable media claims and "the processor" is not part of the media. Thus, this phrase has been removed and the claims have been amended into an appropriate form. Applicant does not believe the scope of the claims have been changed since

Docket No. 200311400-1

the claimed limitations of the computer-readable instructions are still the same. No new matter has been added.

Regarding the informalities in claims 1 and 29 based on the claim language, the Examiner states, "However, in both instances if the bubble is already between the ejection chambers or the electrical components and the filter, the bubble has already passed through the filter. Appropriate correction is required."

Applicant respectfully submits that the claim language is consistent and no correction is needed. For example, as described in paragraph [0024] of the present specification, bubbles can be formed as a result of the ejection process:

"Bubbles can be formed, among other origins, in the ink as a byproduct of operation of a printing device. For example, bubbles can be formed as a byproduct of the ejection process in the print printing device's print cartridge." Paragraph [0024].

It is well known that when ink is heated to temperatures that can vaporize the ink during ejection, bubbles can be formed in the ink. Thus, at the ejection point, the bubbles would be initially formed between the filter and the ejection chambers or the electrical components. Therefore, the formed bubble would not have already passed through the filter as questioned by the Examiner since the bubble is formed in this location. Accordingly, Applicant respectfully submits that the claim language is correct.

Of course, bubbles can be present in the ink for other reasons. In another example, it may be possible for a bubble to be formed somewhere else and then travel through the filter and arrive between the filter and the ejection chambers. However, the claim language is still correct because the bubble would then be moved back to a region where the bubble can pass through the filter as recited in claim 1 or claim 29. Therefore, Applicant believes the claim language is definite and correct. No correction is believed necessary.

Docket No. 200311400-1

**Comments on Statement of Reasons for Allowance**

The Office Action on page 4 recites the reasons for allowance for claim 33. It states that claim 33 recites "the limitations of computer readable media that includes a processor is configured to energize..." Since the antecedents have been corrected in the present amendment as suggested by the Examiner, claim 33 does not recite "a processor configured to energize" but rather it is the computer-readable instructions that, when executed, cause a micro electro mechanical systems device to operate as claimed. Of course, in one example where the micro electro mechanical systems device includes a processor, the claimed media can comprise instructions that cause the electro mechanical systems device to operate as claimed by using the processor. It will be appreciated that the claim is not limited to unrecited electrical or mechanical components since it is a computer-readable media claim.

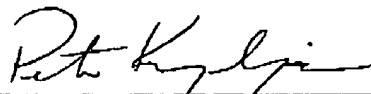
Regarding the reasons for allowance of claim 34, similar to claim 33, it is the computer-readable instructions that, when executed, cause a micro electro mechanical systems device to operate as claimed. The phrase "a processor configured to energize" has been deleted.

**Conclusion**

For the reasons set forth above, **claims 1-40** patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

DEC. 16, 2005



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